quality of research studies in families afflicted with genetic diseases is well conveyed, and the excitement of a scientific discovery with immediate application to a family is palpable. Dr. Nyhan scrupulously acknowledges workers and discoveries in a style which presumably will not overwhelm the lay reader, by mentioning the key discovery in an area informally. A marvelous sense of whimsy also pervades the book, and both are well illustrated by the following paragraph:

> Until 1969 the situation was simply that hopeless. But during that year Drs. John O'Brien and Shintaro Okada of the University of California, San Diego, found the molecular defect that underlies Tay-Sachs disease. In the August 15 issue of *Science* they reported that patients with Tay-Sachs disease demonstrated a total absence of an essential enzyme known as hexosaminidase A (or hex A for short), which ordinarily breaks down sphingolipid molecules. This enzyme is essential in preventing the accumulation of GM2-ganglioside, a specific sphingolipid molecule, in brain and other neural tissue. In the absence of hex A the concentration of GM2-ganglioside becomes progressively greater, interfering with normal neurological functioning and ultimately resulting in death. For the proper breakdown of the GM2-ganglioside molecule to occur, one of its end portions, called a hexosamine, must be split off. The enzyme controlling this specific process is, of course, hexosaminidase, or hex A. This fact had been known for some time. What proved puzzling was the observation that hexosaminidase levels in the blood, brain, and other tissues of patients with Tay-Sachs disease seemed perfectly normal. O'Brien and Okada developed a technique for analyzing hexosaminidase that revealed there were two distinct components of the molecule. They designated them A and B. In patients with Tay-Sachs disease the A enzyme was missing. This accounted for the faulty breakdown of GM2-ganglioside. It is one of the more assuring aspects of science among men that the riddle of this Jewish disease was solved by an Irishman and a Japanese.

This paragraph also illustrates one of my major concerns with this book. To whom is it addressed? Do parents of a child afflicted with only one of the 13,500 possible genetic diseases need to know that hexosaminidase is a molecule with subunit structure? Do those whose children do not have phenylketonuria (PKU) gain insight from a discussion of the specific brand names of low-phenylalanine formulas used in Europe and America? And yet, spina bifida and anencephaly, the neural tube developmental defects, which are more common than either Tay-Sachs disease or PKU, are discussed very briefly and no mention is made of prenatal diagnosis utilizing amniotic fluid alpha-fetoprotein determination. I mention these examples merely to illustrate that while *The Hereditary Factor* is not a textbook of genetics and cannot be judged by those standards of detail and completeness, as a "mini-course in genetics" for the layman, it is, albeit marvelously readable and exciting, definitely a graduate level seminar.

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THE HAND—Diagnosis and Indications—Graham Lister, FRCS, Assistant Clinical Professor of Plastic Surgery, University of Louisville; Consultant Hand Surgeon, University of Louisville Affiliated Hospitals. Longman Inc., 19 West 44th Street, New York City (10036), 1977. 224 pages, $27.50.

Dr. Lister succinctly focuses on the practical issues in diagnosing hand disorders and determining proper treatment. The text is complemented by lucid, well-chosen photographs. He covers his subject under chapter headings: Injury, Reconstruction, Compression, Inflammation, Rheumatoid, Swelling and Muscle Testing. The index is excellent and he includes a valuable bibliography.

This is an important text for all physicians who must evaluate and treat hand problems. For the sake of brevity, it does not cover congenital hand disorders or fractures of the forearm and wrist.

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RECENT ADVANCES IN DERMATOLOGY—Number Four—Edited by Arthur Rook, MD, FRCP, Consultant Dermatologist, Addenbrooke's Hospital, Cambridge; Civil Consultant in Dermatology to the Royal Air Force. Churchill Livingstone—Medical Division, Longman Inc., 19 West 44th Street, New York City (10036), 1977. 395 pages, $27.50.

The *Recent Advances in Dermatology* series rapidly established itself as a key reference source for practicing physicians. This is the place to find a balanced approach to new information that is clinically relevant. Dr. Rook's experience, knowledge and superior judgment enables him to guide each contributor to meet the mark. Unlike most reference works, most chapters in this book are well constructed, easily read *in toto* as a general orientation.

Volume 4 has 11 chapters. Widespread readership will be found for most. Especially noteworthy are opportunity and skin infection, arthropods and the skin, sweat gland disorders, and topical therapy. All dermatologists and medical libraries will find this an essential series to own; internists, generalists and others will find this the place to start their updates in the dermatologic sciences.

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HANDBOOK OF OBSTETRICS & GYNECOLOGY—Sixth Edition—Ralph C. Benson, MD, Clinical Professor of Obstetrics and Gynecology and Emeritus Chairman, Department of Obstetrics and Gynecology, University of Oregon Health Sciences Center, Portland. Lange Medical Publications, Drawer L, Los Altos, CA (94022), 1977. 772 pages, $9.50.

The sixth edition of Dr. Benson's *Handbook of Obstetrics & Gynecology* continues in the tradition of its predecessors in being a good pocket reference text for medical students rotating on obstetrics and gynecology. It is quite complete in topics but superficial in content, and as such serves as a resource for students wishing to survey the specialty as well as a handy reference for definitions of terms, procedures or philosophical approaches to problems. It does not have the informational depth to be of value to house officers or practicing physicians and should not be expected to replace reference texts or more detailed textbooks should a student wish to obtain a deeper understanding of a particular aspect of the specialty. As a handbook, however, it is quite up-to-date.

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MICROVASCULAR RECONSTRUCTIVE SURGERY—Bernard McC. O'Brien, BSc, MS(Melb), FRCS(Eng), FRACS, FACS, Director, Microsurgery Research Unit, and Assistant Plastic Surgeon, St. Vincent's Hospital, Melbourne; Hunterian Professor, Royal College of Surgeons of England; Kazanjian Professor, New York University Medical Center; Consultant Plastic Surgeon to Royal Australian Air Force and to Mercy Maternity Hospital, Melbourne; Senior Research Fellow, Department of Ophthalmology, University of Melbourne. Churchill Livingstone—Medical Division, Longman Inc., 19 West 44th Street, New York City (10036), 1977. 360 pages, $38.00.

This excellent small reference book should certainly be in the library of anyone actively engaged in microvascular surgery. It is also appropriate for resident surgeons interested in becoming exposed to microvascular surgery, and it has in addition a very useful section for a trained surgeon who is planning to set up his own operating unit.

In his preface the author points out the pressing need for the establishment of microvascular surgery centers throughout the world and stresses the necessity for developing a broad clinical work load as well as the facilities for experimental hand-in-hand teaching facilities

in microsurgery. He stresses that the needs of the community will be served only by a team effort. This textbook reflects the author's experience in the operating theater, wards and laboratory over ten years at St. Vincent's Hospital in Melbourne. Acceding to the publisher's request for single authorship at this stage has made it possible to present the St. Vincent's Hospital experience in a very well-integrated manner.

Chapters on the history of the operating microscope and the development of microinstrumentation and microsutures begin the book. They are followed by a chapter on the organization of a microsurgical unit.

The key to microvascular surgery is explored in a small but well organized chapter on the pathophysiology of microvascular occlusions. Basic microvascular technique is next described with clear drawings augmenting the careful photography. It includes a section on the use of anticoagulants and is followed by a chapter on the histopathology of microvascular repairs. This last includes a fascinating section on the scanning electron microscopy of microvascular repair. The use of vein grafts in microvascular surgery is given a separate chapter.

The problems peculiar to anesthesia in microvascular surgery are discussed, the author pointing out that the chief problem is likely to be management of extensive blood loss.

Replantation surgery of limbs and digital replantation surgery are covered in two separate chapters and include protocols for determining the appropriateness of replantation for a particular patient, and the operating-room routine when replantation has been elected. The author points out that replanted hands are more useful and require less rehabilitation than unamputated hands which have suffered severe crushing or burning injuries, but he also cautions that if circulation has been established in the hand without revascularization of any of the forearm muscles, the surgeon should not persist with replanatation and the arm should be amputated. He feels that the main indications for digital replantation are multiple digital injuries and single amputations of the thumb. He cautions that a decision to replant a single complete amputation in any finger, including the index finger requires a special circumstance in an adult. A useful addition here is the section on postoperative complications with their recognition and management.

One stage toe-to-hand transfer is examined with a section clarifying the vascular anatomy of the hallux and second toe. He confirms that loss of toes seems to cause little embarrassment in walking, even when the hallux with its metatarsophalangeal joint is removed.

In the chapter on microvascular free flap and ornamental transfers, the author has, in most of the cases shown, resisted the temptation to use a free flap where a pedicle flap would do as well or better. A particularly good looking result of the repair of the dorsum of the nose following basal cell carcinoma removal in an adult is shown, but one could hardly recommend this method for a surgeon less skilled than the author.

The challenging problems of microlymphatic surgery are discussed and very good results following lymphaticovenous anastomoses in the upper extremity are shown. Microvascular free bone and joint transfers are felt to have significant potential usefulness and free muscle transfers are discussed. A remarkably good result in facial palsy is shown. Microneural and funicular nerve repairs are evaluated, the author agreeing with most other contemporary writers that coaptation of at least some of the funiculae in larger nerves is desirable. Microneural grafting and cable grafting are also discussed. The microsurgery of miscellaneous tubes and structures such as the fallopian tubes and vas are considered. Penile replantation is described, and the possibility of microvascular techniques in orchiopexy of the undescended testis is suggested. Experimental colon and small bowel transfers with microvascular anastomoses in dogs suggest another method for esophageal replacement. Microrenal transplantation in rats is presented as a useful research tool and coronary artery surgery is discussed briefly.

Textbooks presented by British publishers are well known for their clarity of writing and as such are a delight to the student. This book is no exception to that observation. For anyone considering work in microvascular surgery, it is well worth its asking price.

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CLINICAL ORTHOPAEDIC EXAMINATION—Ronald McRae, FRCS, Consultant Orthopaedic Surgeon, Southern General Hospital, Glasgow; Honorary Clinical Lecturer in Orthopaedics, University of Glasgow; Lecturer in Surgery and Orthopaedics, Glasgow School of Occupational Therapy; Lecturer in Anatomy, Glasgow School of Chiropody; Fellow of the British Orthopaedic Association and Member of the Institute of Medical and Biological Illustration. Churchill Livingstone—Medical Division, Longman Inc., 19 West 44th St., New York Cty (10036), 1976. 219 pages, with original drawings by the author, $11.50 (softbound).

This is a clear and concise, well written and illustrated book for orthopedic examination. It very well supplements the early teaching and experience of students, which may be lacking because of the unfortunate size of student classes and the dearth of adequate clinical material. Students, therefore, may have acquired only a sketchy knowledge of physical examination techniques for various conditions and the book offers a big help in developing procedures for arriving at diagnosis and treatment.

The author has divided the text according to anatomical areas, in so far as patients generally describe their complaints on an anatomical basis. He stresses that such an approach may not reveal the most obscure and hence will tax the most experienced, but the most frequent mistake is failure to diagnose the common. He wisely, in my opinion, has avoided excess details but gives specific and pertinent details for the common problems and advises consulting with recognized orthopedic textbooks for the more demanding readers seeking complete descriptions.

The illustrations are excellent anatomical drawings and point out important features dealing with inspection, palpation and examination of movements, both normal and abnormal, of specific joints and areas. Simple screening tests for such motions are included. There are excellent drawings showing segmental sensory nerve supply as well as motor supply for both upper and lower extremities. Radiographic drawings also are well done, showing numerous common abnormalities of injury and disease.

The final section shows radiographs of common pathological conditions in the segmental areas and is in the form of a diagnostic quiz with some history, important clinical findings for each case and answers given after.

I can highly recommend this book, especially for medical students, interns and residents. It also offers a quick review of clinical orthopedic examination for practicing physicians and surgeons.

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